Bay Area Air Quality Management District
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Staff Report

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Proposed Amendments to BAAQMD Regulation 8, Rule 16: Solvent Cleaning Operations

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Executive Summary

Regulation 8, Rule 16 was originally adopted in 1979 and was intended to reduce volatile organic compound (VOC) emissions from the cleaning of metal parts and products. The rule establishes equipment and operation standards for cleaning equipment. The major air districts in California have similar rules.

The rule is proposed to be amended to accommodate improvements in technology and clarify existing language. Proposed amendments to Regulation 8, Rule 16: Solvent Cleaning Operations will become effective January 1, 2003. These amendments will eliminate cold cleaners using organic solvent in targeted industries, and require the use of aqueous solutions containing not more than 50 grams/liter of organic solvent.

The proposed amendments are expected to result in an emission reduction of approximately 2.2 tons per day at a cost to industry of approximately $2,198,320 per year. The cost effectiveness is estimated to be $1,664 per ton of emissions reduced.

Proposed amendments targeted at the “repair and maintenance” cleaning, by far the largest user of cold cleaners, are scheduled to be discussed at one BAAQMD workshop and two dinner meetings with the Automotive Service Council. The proposed amendments are intended to minimize the economic impacts of the rule while achieving emission reductions. Pursuant to the California Environmental Quality Act (Public Resources Code Section 21000 et seq), the District will conduct an initial study for the proposed amendments.

Introduction

The Bay Area Air Quality Management District’s 2001 Bay Area Ozone Attainment Plan[1] outlines control measures designed to attain national ambient air quality standards for ozone in the Bay Area. Ground level ozone is formed when sunlight acts on volatile organic compounds and nitrogen oxides emitted into the atmosphere. Most of these emissions come from mobile sources like cars and trucks and stationary sources having a single emission point such as a "smoke stack." Volatile Organic Compound (VOC) emissions from stationary

sources contribute to the formation of smog in the atmosphere. VOCs react photochemically with oxides of nitrogen to form ozone, a criteria pollutant. Ozone is a strong oxidizer that irritates human tissue and damages plant life.

Regulation 8, Rule 16: Solvent Cleaning Operations, was originally adopted on March 7, 1979 and is intended to reduce emissions from solvent cleaning operations using cold, vapor and conveyorized solvent cleaners. Cleaning operations are widespread throughout the manufacturing industries. For most surface coating operations, organic solvents are used to remove uncured coatings, inks and adhesives, and to maintain application equipment, spray booths, and other materials used in the coating process. In order to remove contaminants such as dust, oils, etc., solvents may be used for preparing the substrate prior to coating, usually by wipe cleaning. Solvents are also used in repair and maintenance operations such as machine shops and automotive repair shops to remove grease and contaminants from tools and/or automotive parts.

In the 2001 Bay Area Ozone Attainment Plan, Control Measure SS-14[2], Aqueous (Water-Based) Solvents, was developed in order to reduce emissions of VOCs by the use of low VOC aqueous cleaners. Traditional solvents have been petroleum-based organic compounds, such as mineral spirits, that volatilize completely into the atmosphere and are precursors to ozone formation. Switchover to alternative solvents in appropriate cleaning applications will result in a reduction in VOCs.

Background

Regulation 8, Rule 16, Solvent Cleaning Operations, contains specific operating requirements for solvent cleaning equipment such as vapor solvent cleaners, conveyorized degreasers, and cold cleaners. It sets equipment standards and operating requirements that reduce solvent emissions. The rule is based on the standards described in the United States Environmental Protection Agency's (EPA) 1977 guidance, "Control of Volatile Organic Emissions from Solvent Metal Cleaning"[3] and the California Air Resources Board's (ARB) 1991 document, "Organic Solvent Cleaning and Solvent Cleaning Operations."[4]

The first amendment to the rule occurred in 1989. The amendments primarily served to correct deficiencies identified by the EPA during the post-1987 State Implementation Plan review.

Subsequently, in 1998, the rule was amended to incorporate the following:

- Each facility was allowed a single organic solvent cold cleaner with a maximum solvent usage limit of 20 gallons per year. Any additional cleaners in a facility were required to:

  - Use an aqueous solution containing not more than 50 g/l VOC; or
  - Be permitted as an emission source by the District as per Regulation 2, Rule 1: Permits. Regulation 2, Rule 1 was also amended to require permits for multiple cold cleaners in a facility.
- Solvent cleaners using halogenated solvents are also subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP). Language was added to reference the federal rule.
- New language was added to the rule to clarify applicability of the rule to new types of solvent cleaners. Enclosed cleaners (closed-loop), solvent vapor dryers (IPA dryers) and spray gun cleaners are examples of these cleaners.
- New language was added to clarify the applicability of the rule to include only solvent cleaning equipment.
- The rule was renumbered. Out-dated sections such as administrative requirements were dropped. Definitions were alphabetized.

The 1998 amendments were based in part on South Coast AQMD Rule 1171[5]. At that time, the South Coast rule included exemptions from its general cleaning standard that allowed facilities, which perform repair and maintenance cleaning to have an organic solvent cold cleaner. In addition, the BAAQMD experienced difficulty enforcing restrictions on what part can be cleaned in organic solvent cleaners. Therefore, the 1998 amended rule exempted one solvent cleaner per facility from its 50-gram-per-liter standard, but required all other cleaners to either meet the standard or to have a permit. At that time, the BAAQMD and other districts did not require permits for the small remote-reservoir cold cleaner typically found in shops, which perform repair and maintenance cleaning. In practical effect, the SCAQMD rule in 1998 and the BAAQMD's 1998 amendments to Regulation 8-16 were similar.

The 1998 amendments forced operators to look at their cleaning processes. Due to the permit exemption for one organic solvent cold cleaner, some processes were partitioned into aqueous and organic solvents to avoid the permit process. Others, which chose to continue using their organic solvent cold cleaners, submitted permit applications for their other solvent cold cleaners to meet the requirements of 1998 amendments. The majority of new permits for solvent cold cleaners were from the automotive repair industry.

On April 19, 2001, the San Joaquin Valley Unified APCD adopted a rule[6] with a 50-gram-per-liter standard, with more limited exemptions than those found in the SCAQMD rule and without the specialty cleaning categories. Because many types of industry found in the SCAQMD and Bay Area are not found in the San Joaquin Valley, the SJVUAPCD rule does not include provisions for specialty cleaning that are found in the SCAQMD rule and are likely to be necessary in the Bay Area. In discussions with the SJVUAPCD, it was also discovered that

their interpretation on equipment capacity was slightly different from that of the BAAQMD. The SJVUAPCD allowed the solvent volume to determine equipment capacity.[7] For example, if less than two gallons of solvent was used in a solvent sink, then that solvent sink would be determined to have a capacity less than two gallons, even if its overall capacity was greater than two gallons. The BAAQMD uses sink or reservoir volume to determine capacity. Even if the volume of solvent is less than the sink's overall capacity at one time, the BAAQMD is concerned that the owner/operator of the sink may not always operate the sink in that same manner. The BAAQMD current exemption for one gallon capacity solvent cleaners with an open top surface area less than one square foot, and its interpretation of capacity, is more stringent than that of the SJVUAPCD.

Though the BAAQMD rule has produced some of the emission reductions that would come from adopting the South Coast requirements in the Bay Area, further emission reductions can be achieved by amending the BAAQMD rule to require that all cold cleaners at facilities which perform repair and maintenance cleaning use only cleaners which meet the 50-gram-per-liter standard. Safety Kleen, a major supplier of cold cleaners for these facilities, has successfully converted approximately 30,000 mineral spirits parts cleaners in the Los Angeles area to aqueous cleaners in 2000 to comply with VOC standards. Safety Kleen has demonstrated that the use of aqueous cleaners in southern California is technologically feasible and cost-effective.

In a typical repair and maintenance facility, there is one cold cleaner (parts washer), a 20 gallon unit on a six week solvent change-out cycle. These units are typically described as a "sink on a drum". The solvent is located in the drum. Parts are placed in the sink area and solvent is pumped over the part. The solvent then drains into the drum (enclosed reservoir). Mineral spirits, a low vapor pressure organic solvent, is the preferred cleaner. Oils and grease are the typical soils that are removed. The parts washers are unpermitted and are leased from the supplier/vendor. The supplier provides all maintenance, cleanup and repair of the cleaner and recycling of the solvent.

Bus maintenance terminals, fleet vehicle maintenance centers, and truck stop facilities use larger parts washers (typically 35 gallon units). These facilities usually have more than one parts washer. The larger units are immersion sinks, a rectangular cabinet with the solvent covering the bottom of the tank. A tray holds the part and the solvent is pumped over the part, draining to the tank bottom. The larger units may have filters and oil skimmers to prolong the life of the bath.

Aqueous Cleaning Technology

The Institute for Research and Technical Assistance (IRTA) with funding from the U.S. Environmental Protection Agency's Environmental Justice Pollution Prevention Program conducted a developmental study of water-based cleaners as alternatives to mineral spirits in auto repair facilities in 1995 and 1996.[8] The demonstration project involved testing water-based cleaners in 18 auto repair facilities to determine their feasibility and to optimize their conditions of use. The results of the study indicated that water-based cleaners were a viable alternative to mineral spirits.

There are five generic types of cleaning systems available for use with water-based cleaners. Each of these is described briefly below[9].

- **Sink-on-a-Drum Parts Washer**
  This unit consists of a sink mounted on a drum that has a fluid capacity ranging from about 15 to 40 gallons. It contains a heater, a pump, a faucet and brush applicator.

- **Enzyme System**
  Enzyme systems are generally modified sink-on-a-drum units and are commonly made of plastic. They contain a specifically formulated surfactant-based emulsifying neutral enzyme cleaner. Microbes are added to the system either in an impregnated filter or directly into the cleaning formulation. The cleaner emulsifies the oil and grease and the microbes break down the contaminants into carbon dioxide and water. Like the sink-on-a-drum unit, the enzyme system has a heater and a pump. Units generally have a 15 to 30 gallon liquid capacity.

- **Immersion Parts Washer**
  The difference between this unit and a sink-on-a-drum is that the immersion system has a false sink that can be removed and a reservoir that is accessible for cleaning or soaking. The unit also contains a heater and a pump and has a liquid capacity of 30 to 60 gallons. Again, it can be constructed of metal or plastic.

- **Spray Cabinet**
  This type of unit operates by spraying and/or flushing high pressure cleaning formulation in an enclosed cabinet. The parts are placed inside the cabinet, generally on a platform, and the door is closed. The spray nozzles are positioned to target specific areas of the parts. The mechanical action provided by the worker for the other units is automated in the case of the spray. Spray cabinets are made of metal and some have plastic tops. They can be classified as top or front loaders. The liquid capacity of the smaller units for use in this sector ranges from 20 to 100 gallons. These units are generally heated to a higher temperature than the other types of units because workers' hands do not come in contact with the fluid.

In 1995 when IRTA performed the developmental study, there were very few vendors that offered aqueous cleaning formulations, equipment or systems. By 1998, numerous vendors have begun offering new products based on water-based cleaning. IRTA conducted case studies in Southern California that represent a range of repair and maintenance cleaning needs at different maintenance and repair facilities.[10] As part of the project, IRTA performed cost analyses that compared the costs to each facility of using mineral spirits systems and the cost of using water-based systems. In all cases but one, the cost to the facility using the water-based cleaning system is lower than the cost of using the mineral spirits system. In some instances, the reason the cost is lower is that the water-based cleaners require change out less frequently than the mineral spirits. In other instances, where the facilities have purchased spray cabinets or ultrasonic units, the cost is often dramatically lower because of the labor savings from the use of the automated systems. In one instance where the cost of the water-based system was higher, the facility converted to a much better cleaning unit. In addition, the facility (an auto repair facility) is now able to use the cleaning unit for parts and brake cleaning and can avoid the purchase of aerosol brake cleaners.

The emergence of a new generation of highly effective cleaning units and solutions is the direct result of environmental regulations recently passed in the South Coast and Bay Area. For example, the City and County of San Francisco Hazardous Waste Management Program, under the Aqueous Cleaning Demonstration Project, demonstrated aqueous cleaning in selected City department facilities to determine the viability of replacing solvent cleaning with aqueous cleaning. Between February 1988 and January 1999, 14 different aqueous cleaning units were demonstrated at three Municipal Railway (MUNI) fleet maintenance facilities. The results of the demonstration project indicate that aqueous cleaning is a viable and cost-effective option for the City's department facilities.[11]

In addition, the Toxics Use Reduction Institute Surface Cleaning Laboratory associated with the University of Massachusetts Lowell, has done extensive research and testing to evaluate the effectiveness of alternative cleaning chemicals and related equipment on a variety of substrates and soils. The goal is to identify, develop and promote safer alternatives to hazardous materials such as chlorinated and other organic solvents. The Surface Cleaning Laboratory has evaluated over 350 cleaning products, many with multiple trials, to identify specific alternatives to solvents currently used for cleaning. The results are available to interested businesses by request from the Laboratory at http://www.cleanersolutions.org/Simple_Solutions.html.[12] The South Coast Air Quality Management District, as well, has done research to identify and approve solvents into their Clean Air Solvent Certification Program, the results of which are available at http://www.aqmd.gov/business/water.html.[13]

Emissions Subject to Control

Currently, the District exempts one solvent cleaner per facility from its 50 grams per liter standard, but requires that all other cleaners either meet the standard or have a permit. Consequently, there are no District emission records on these unpermitted units. The District's current emission inventory analysis is based on an ARB 1987 methodology utilizing statewide data. Emissions from area sources such as the parts washers are grouped into categories. Sources in the commercial solvent cleaning categories include automotive repair facilities. In the 2001 Ozone Plan Source Inventory Description, emissions from this commercial solvent cleaning category were estimated at 6 Tons/Day.

Summary of Proposal

Staff proposes the following amendments, effective January 1, 2003:

- Deletion of the limited exemption (section 8-16-121) for one single cold cleaner per facility with an annual solvent loss limit of 20 gallons per year.
- Deletion of the limited exemption (section 8-16-122) for permitted cold cleaners.
- Addition of a definition (section 8-16-233) of repair and maintenance cleaning.
- Addition of a definition (section 8-16-234) of automotive repair facility.
- Addition of an exemption (section 8-16-123) for specific cleaning operations.
- Addition of a standard requiring that all facilities which perform repair and maintenance cleaning use cleaners with a VOC content no greater than 50 grams per liter.
- Minor deficiencies of the rule (i.e., incorrect section references made in 8-16-111, 8-16-602.2, and 8-16-602.3; inconsistent definition made in section 8-16-214; and increasing recordkeeping interval of section 8-16-501.2) identified by EPA[14] are to be corrected.
- Addition of standards to the limited exemption of section 8-16-115 ensure good housekeeping and minimize solvent evaporation.

The revisions to the rule are being proposed for the following reasons:

- To adopt Control Measure SS-14 from the Bay Area's 2001 Ozone Attainment Plan, Aqueous (Water-Based) Solvents, in order to reduce emissions of VOCs by the use of low VOC aqueous cleaners.
- To accommodate changes in technology (new cleaning materials and equipment), language is being proposed to clarify the specific applicability of the rule sections.

Emission Reductions

From a search by SIC code of all repair and maintenance related businesses in the nine counties of the Bay Area, Staff estimated that there are approximately 6,000 facilities. These facilities include automotive exhaust systems repair, tire retreading and repair, automotive glass replacement, automotive transmission repair, general automotive repair, motorcycle repair, and industrial truck repair.

Safety Kleen, a parts washer vendor with a market share of approximately 75%, services approximately 6,347 facilities with a combined total of 8,869 parts washers.[15] Of these facilities, 4,500 are repair and maintenance related businesses. In these businesses, there are approximately 5,900 units. Because Safety Kleen is estimated to service 75% of the parts washer market, the remaining 25% (approximately 2,000 units) are serviced by other vendors. Using Safety Kleen's data, Staff now estimates that there are 7,900 solvent parts washers in the Bay Area used for repair and maintenance cleaning.

Staff estimate that the emission factor of these parts washers is 0.6 lb/day per unit[16] after factoring in sludge and other foreign solvents in the waste solvent stream. The corresponding emissions from cold cleaners in the Bay Area are estimated to be 2.37 tons per day (TPD) based on the following calculations:

(7,900 cold cleaners) (0.6 lbs/day) / (2000 lb/ton) = 2.37 TPD

The mineral spirits used in most cold cleaners average 6.7 lb/gal of volatile organic compounds (VOC). Replacement of this organic solvent with an aqueous cleaner at 50 g/l (0.42 lb./gal) would result in an emissions reduction of 2.2 TPD, based on the following calculations:

Equivalent emission reduction expressed as gallons of solvent emitted:
(2.37 TPD) (2000 lb/ton) (1 gal/6.7lb) = 707 gal/day

Emission reductions from solvent substitution:
(707 gal/day) (6.7 lb./gal. - 0.42 lb./gal) / (2000 lb/ton) = **2.2 TPD**

The total emission reduction for staff's proposal is the **2.2 TPD** emission reduction for solvent substitution at repair and maintenace facilities.

Cost of Control

General

The costs for most of the changes mandated by this rule revision are negligible except for the costs of switchover to aqueous systems.

For the switchover to aqueous cleaners, the costs for the Bay Area are based on information obtained from the SCAQMD staff report[17], the IRTA report[8], and supplemented by Bay Area market information. South Coast staff calculated a

cost-effectiveness of -$582 per ton of VOC reduced. The negative number represents cost savings for the affected industry. The IRTA study also reports that the "use of the water-based cleaning systems is likely to be less costly overall than the use of mineral spirits."

Staff estimates that approximately 75 percent of the Bay Area shop operators use petroleum-based parts washers provided by a nationwide service provider. The service provider charges a fee for removing the spent solvent, replacing it with recycled solvent and hauling away the spent solvent for recycling. Typical cost for this "cradle to grave" rental service is approximately $1500 per year. The costs vary depending on the frequency of visits for bath changeout.

The following costs were reported by IRTA for a mineral spirits parts washer rented from a major supplier:

Table 1. Mineral Spirits Parts Washer[8]

Annualized Equipment Cost	N/A
Solvent Cost	N/A
Electricity	$240
Disposal	N/A
Service Charge	$1213
Total	**$1453**

Equipment costs have not been included because the service provider usually owns the equipment. Solvent and disposal costs are included in the service charge.

The costs of a comparable aqueous parts washer are:

Table 2. Aqueous Parts Washer[8]

Annualized Equipment Cost (0.163) ($1000)[a]	$163
Solvent Cost	$297
Electricity	$720
Disposal	$300
Total	**$1480**

The initial cost of the equipment is estimated to be $1000 annualized over a 10 year period (the assumed equipment lifetime) at 10 percent interest. Solvent costs generally average $297; $9/gal, at 3 changeouts per year using 33 gallons of concentrate per year. Waste disposal costs are $200 per drum, with a bath life of approximately 8 months or 1.5 times per year.

[a] based upon a 10 year amortization period at an interest rate of 10%.

The following costs were supplied by a solvent cleaner and solvent supplier[18]:

Table 3. Solvent Unit (Operator owned)[9]

Annualized Equipment Cost	$236
Solvent Cost, ($10) (13.3 gal) ($10) (30 gal)	$133 (makeup) $300 (initial)
Electricity	$240
Cost of filters	$62
Disposal	$200
Total	**$1171**

Cost of a new parts washer (35 gal.) is $1,450. Cost of solvent and filters is $195. The costs for disposal could not be calculated because the waste stream is usually commingled with the shop's oily waste stream. As the waste solvent has a similar profile as used motor oil, shops are paying the same price per gallon for disposal. According to the supplier, the initial solvent charge never needs changeout. Solvent is added to replace quantities lost to dragout and evaporation. Eventually, when the solvent becomes too contaminated with oil, it is pumped out of the tank into a holding tank. The waste residue is removed and the tank is cleaned. The used solvent is pumped back into the tank for filtering and reuse. (This process may occur after one or two years of use.) Cost-effectiveness calculations are estimated based on a "worst case" scenario of one waste shipment per year.

The design of the aqueous parts washer is virtually identical to mineral spirits parts washer except that the unit is usually plastic or stainless steel. For heavy-duty applications, the preferred design is similar to a dishwasher, an enclosed spray cabinet.

If aqueous systems become mandatory, staff believe that most users will opt to dispense with a service provider in order to save costs. The nationally known supplier is willing to service aqueous systems but will charge 10 percent more than a comparable mineral spirits system. Costs for additional equipment are not included in the analysis: additional rinse stations, evaporator ($3000), oil skimmer ($200), hot air dryer, etc. Only the larger facilities would require such equipment.

In the IRTA study, costs of low use shops (light workload) and high use shops (heavy duty) were compared based on the observation that most shops tended to be either large or small rather than "middle of the road." Costs at low use shops using aqueous solutions were lower than comparable mineral spirits systems; the extended bath life and reduced disposal cost resulted in net savings for the operators.

A comparison of the high use shops also demonstrated net savings to the operators of aqueous systems. Two factors contributed to this result, labor costs

and type of equipment. Labor costs were estimated to be higher for the mineral spirits parts washer versus the aqueous system. For heavy-duty applications, the recommended equipment type is a spray cabinet. These units are more expensive at $5000 to $8000. However, labor costs are reduced because the worker loads the unit and is free to perform other tasks rather than manually cleaning the part.

Costs will determine the action of most operators. Because the costs for aqueous and mineral spirits parts washers are comparable, facility operators will likely choose their equipment type based on regulatory requirements, worker exposure, ease of use, and individual preferences. Facilities attempting to minimize costs will focus on the factors that are most significant in contributing to total cost: the initial equipment cost and bath life, and the interval between bath changeout.

Analysis of Staff Recommendation

Staff recommend that all repair and maintenance facilities be required to only use aqueous cleaners in their cold cleaners. Data show that aqueous cleaners are cost-effective and clean adequately for repair and maintenance operations.

In analyzing the cost-effectiveness of this control strategy, the following assumptions were made:

1. 5,900 cold cleaners will switch to water-based cleaners.
2. Organic solvents average 6.7 lb of VOC per gal.
3. The inventory of affected cold cleaners in the Bay Area is 5,900 units.
4. Aqueous cleaners sold in concentrated form require a dilution of 4:1 (one gallon of concentrate plus 3 gallons of water to equal a 25% concentration by volume).
5. The units are operated 312 days per year.

Table 4. Annual Cost of Compliance (Industrywide)

Equipment Replacement Cost (Solvent Cleaner) (5900) ($236)[10]	$1,392,400
Equipment Replacement Cost (Aqueous) (5900) ($163)[9]	$961,700
Operation Cost (Aqueous, Electricity) (5900) ($720)[9]	$4,248,000
Operation Cost (Solvent, Electricity) (5900) ($240)[10]	$1,416,000
Disposal (Aqueous) (5900) ($300)[9]	$1,770,000
Disposal (Solvent) (5900) ($200)[10]	$1,180,000
Organic Solvents (707 gal) ($10/gal) (312 days/yr)	$2,205,840
Aqueous Cleaners (707 gal) (.25) ($10/gal) (312 days/yr)	$551,460
Cost Difference in Waste Disposal	$590,000
Cost Difference in Operation Cost	$2,832,000
Cost Difference in Solvent Cost	-$1,654,380
Cost Difference in Equipment Replacement	-$430,700
Estimated Emissions Reductions 2.2 TPD(365 days/yr)	803 TPY
Estimated Cost-Effectiveness ($1,336,920)/803TPY	$1,664 /ton

An analysis of the cost for businesses to switch to new operations (cost-effectiveness) is a requirement under state law. The cost of compliance is identified as the cost per ton of VOC emissions reduced.

The total costs for solvent substitutions are:

Total cost = Equipment Cost Difference + Operation Cost Difference + Material Cost Difference + Disposal Cost Difference.

= $1,336,920 per year

Impacts

The socioeconomic impacts, incremental costs, environmental impact, regulatory impacts, health impacts of the proposed amendments shall be studied and the results of this study shall be included in this staff report.

Socioeconomic Impacts

A copy of the socioeconomic impact report shall be provided in the appendix of this staff report when it is completed.

Incremental Costs

Health and Safety Code Section 40920.6 requires the District to (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost effectiveness for each option, and (3) calculate the incremental cost effectiveness for each option. To determine incremental costs, the District must "calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option."

The incremental costs, if any, shall be identified.

Environmental Impacts

Staff are continuing to assess the potential environmental impacts of the proposed amendments and will comply with the provision of the California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et seq). Notice of compliance and availability of documents will be legally noticed and posted on the District's website.

The environmental impacts, if any, shall be identified.

Regulatory Impacts

AB 1061, which was signed by the Governor in September 1997 and is effective January 1, 1998, adds Section 40727.2 to the Health and Safety Code and imposes new requirements on the adoption, amendment, or repeal of air district regulations. The law requires a district to identify existing federal and district air pollution control requirements for the equipment or source type affected by the proposed change in district rules. The district must then note any differences between these existing requirements and the requirements imposed by the proposed change. Where the district proposal does not impose a new standard, make an existing standard more stringent, or impose new or more stringent

administrative requirements, the district may simply note this fact and avoid the analysis otherwise required by the bill.

The regulatory impacts, if any, shall be identified.

Conclusion

Since the EPA has redesignated the Bay Area to an ozone nonattainment area, the District must achieve new emission reductions. This measure presents an opportunity for a significant reduction in a single source category. The proposed revisions to Regulation 8, Rule 16, Solvent Cleaning Operations, will clarify existing language and will partially satisfy the requirement in the Clean Air Plan for adoption of control measure SS-14.

Pursuant to California Health and Safety Code Section 40727, regulatory amendments must meet findings of necessity, authority, clarity, consistency, non-duplication, and reference. The proposed amendments are:

- Necessary to limit emissions of volatile organic compounds, a primary precursor to urban ozone formation;
- Authorized by Sections 40000, 40001, 40702, and 40725 through 40728 of the California Health and Safety Code;
- Written or displayed so that its meaning can be easily understood by the persons directly affected by it;
- Consistent with other District rules, and not in conflict with state or federal law;
- Non-duplicative of other statutes, rules, or regulations; and
- Are implementing, interpreting, or making specific the provisions of California Health and Safety Code Sections 40000 and 40702.

It is staff intent that the control measure that is to be adopted shall be feasible in the Bay Area and enacted readily.

References

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[4] California Air Resources Board, Determination of Reasonably Available Control Technology and Best Available Retrofit Control Technology for Organic Solvent Cleaning and Solvent cleaning Operations, California Air Resources Board, Sacramento, CA, 1991.
[5] South Coast Air Quality Management District, Rule 1171 - Solvent Cleaning Operations, Amended October 8, 1999.
[6] San Joaquin Valley Unified APCD, Rule 4662 – Organic Solvent Degreasing Operations, Amended December 20, 2001.
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[8] Morris, Mike and Katy Wolf, Parts Cleaning in Auto Repair Facilities: The Conversion to Water, Institute for Research and Technical Assistance, April 1997.
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[10] Water-Based Repair and Maintenance Cleaning: Case Studies Conversions prepared for Southern California Edison by Michael Morris and Katy Wolf, Institute for Research and Technical Assistance, Pollution Prevention Center, March 12, 1999 (available at http://home.earthlink.net/~irta/rprt0003.htm).
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[13] Suppliers and/or Manufacturers of Water Based Cleaning Materials and/or Equipment, South Coast Air Quality Management District, April, 2000 (available at www.aqmd.gov/business/water.html)
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[15] March 5, 2002 Email from Bill Yates to Carol Lee.
[16] Bay Area Air Quality Management District, Staff Report, Proposed Amendments to BAAQMD Regulation 8, Rule 16, Solvent Cleaning Operations, July 1998.
[17] South Coast Air Quality Management District, Staff Report, To Amend Rule 1171 - Solvent Cleaning Operations, September 13, 1996.
[18] Chancellor, Bob, Telephone communication, Zep Manufacturing Co, July 1977.